

REMARKS

Claims 1 – 13 remain in this application. Claims 1 – 4, 7, and 10 – 12 have been amended. Reconsideration of this application in view of the amendments noted is respectfully requested.

Claims 1 and 11 were objected to because of certain typographical and grammatical informalities. To correct these informalities, the bracket sign “)” has been removed from claim 1 and the word “with” in the phrase “with the therein included” has been removed from claim 11. Further, claim 11 has been amended to read in part that --the applicator elements are non-contacting and comprise two nozzle units including nozzles-- to provide antecedent basis for “the therein included nozzles.” Support for this recitation is found in the specification on page 11, lines 3 – 7.

Claims 1 – 4, 7, 10, and 12 were rejected under Section 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, it was found that certain limitations in the claims lacked antecedent basis. Therefore, claims 1 – 4, 7, 10, and 12 have been amended as follows to make the claims definite.

Claim 1 has been amended such that “the cross component” now reads --the at least one cross component--. Further, claim 1 has been amended to clarify the language of the claim. Of particular note, claim 1 now reads in part that --the frame comprises at least one cross component of a box-type structure formed of a plurality of sheet metal cells--. Moreover, claim 1 has been amended to improve the syntax of the claim.

Claim 2 has been amended such that “the end component” now reads --the end components-- and “the cross component” now reads --the at least one cross component--.

Claim 3 has been amended such that “the cross component” now reads --the at least one cross component--.

Claim 4 has been amended such that “the conduit” now reads --the at least one conduit-- and “the cross component” now reads --the at least one cross component--.

Further, "a" has been added in front of "profiled sheet metal blade" to improve the syntax of the claim.

Claim 7 has been amended such that "the end component" now reads --the end components--. The verb "is" has accordingly been amended to --are-- for grammatical reasons.

Claim 10 has been amended such that "the end component" now reads --the end components-- and "the cross component" now reads --the at least one cross component--. Further, the "sheet metal blade" has been deleted from claim 10. The "sheet metal blade" is introduced in claim 4, but claim 10 depends directly from claim 1, so there is no antecedent basis for the "sheet metal blade" in claim 10.

Claim 12 has been amended such that "the substantially similar nozzle units" now reads --the nozzle units are substantially similar--. Further, "the disabled nozzle unit" has been changed to --a disabled nozzle unit--.

Based upon the foregoing, applicant submits that claims 1 - 4, 7, 10, and 12 are now definite, and applicant therefore requests that the Section 112, second paragraph rejection be withdrawn.

Claims 1 - 3 and 5 - 13 were rejected under Section 103(a) as being unpatentable over Yoshinaga (U.S. Patent No. 5,650,011) in view of Williamson et al. (U.S. Patent No. 2,772,653, hereinafter "Williamson"). Applicant respectfully traverses this rejection. Yoshinaga discloses a coating apparatus including a pair of spaced-apart die devices. Each die has a coating liquid reservoir defined therein and a transversely elongated slot orifice or discharge port disposed on a corresponding one of opposite sides of a web. The slot orifices extend along a width of the web for applying a stream of coating liquid onto the opposite sides of the web. Supply devices supply coating liquid to the liquid reservoirs at a specifically chosen feed amount per unit time corresponding in value to the web's travel rate multiplied by a preset coat thickness and a preset coat width, which allows for constant coating thickness on opposite sides of the web and for intermittent application of coating liquid on the web (See "Objects of the Invention," column 1, line 62 - column 2, line 21).

Yoshinaga does not teach or suggest a coating station as in the present invention. In contrast to Yoshinaga, the present invention is a coating station including a frame having at least one cross component and end components. The cross component(s) is made of sheet metal, is formed into a box-type structure, and is attached by its end parts to the end components. The cross component(s) extends substantially across the entire width of a web arranged to pass through the coating station. The coating station also includes applicator elements supported by the frame for applying a coating material to the surface of the web.

There is no teaching or suggestion in Yoshinaga of a frame having at least one cross component and end components, the cross component(s) made of sheet metal and formed into a box-type structure. In Yoshinaga, the left and right dies 12, 14 include upper bodies 26 and lower bodies 28 which are thick, solid beams that are heavy and in no way made of sheet metal. Further, the structures 12, 14 are dies, not a frame. In contrast, in the present invention, the cross component(s) and end components form a frame having a box-type structure (i.e., a cell structure having a plurality of cells) (See Figs. 5a, 5b). Furthermore, the dies 12, 14 are not attached at their ends to end components. In fact, in Yoshinaga, there are no end components. Even more, Yoshinaga does not teach or suggest applicator elements supported by the frame. Instead, in Yoshinaga, each die includes a temporary elongated slot/port 60 that runs along the length of the die and is defined by the distance between the upper body 26 and lower body 28 when the die is in the open position (see Fig. 4). Coating liquid may flow from inside the die through the slot and onto the web. When the die is in the closed position (see Fig. 3), the slot/port 60 does not exist. In contrast, in the present invention, the coating station includes applicator elements that are nozzle units, each nozzle unit including a plurality of nozzles arranged in a row. The applicator elements are non-contacting and spray coating liquid onto the web passing through the coating station (see page 6, lines 16 - 24 and page 11, lines 3 - 11).

Turning to Williamson, Williamson discloses a small apparatus for coating a very narrow strip. The housing 14, 14' of the apparatus may be made of sheet metal, but it is merely a housing for covering and shielding the rotating parts of the apparatus. The

rotating parts of the Williamson apparatus are mounted to a boss 5, a base 11, and a supporting post 13, which thus act as a frame. These parts are solid and not made of sheet metal. The housing of Williamson is not a frame according to the present invention. In the present invention, the frame is made of sheet metal and the frame is not a housing. Thus, no combination of Yoshinaga and Williamson results in the present invention.

For all of the above stated reasons, claim 1 of the present application is patentable over Yoshinaga and any combination of Yoshinaga with Williamson. Also, claims 2 - 3 and 5 - 13, depending directly or indirectly from claim 1, are also allowable.

Nevertheless, with respect to claim 2, in Yoshinaga, bolts 40 do secure the upper body 26 to the lower body 28. Neither the upper body nor the lower body, however, are an end component, and therefore Yoshinaga does not teach or suggest a cross component removably attached to an end component with one or more screw connections.

With respect to claim 3, in Yoshinaga, the reservoir 54 is a reservoir, i.e., a place where something is kept in storage. The reservoir 54 holds coating liquid. In contrast, in the present invention as claimed in claim 3, a conduit is arranged inside the cross component of the frame. The conduit is a conduit, i.e., a channel through which something (such as a fluid) is conveyed. In the present invention, the conduit is used especially for recirculating the cooling water in the coating station (see page 9, lines 3 - 4). Therefore, Yoshinaga does not teach or suggest a conduit as in claim 3 of the present application.

With respect to claims 5 and 6, Yoshinaga only has one die per side of the apparatus. Further, as stated above, Yoshinaga does not have a conduit as in the present invention. Therefore, Yoshinaga does not teach or suggest a multiplicity of cross components nor conduits as claimed in claims 5 and 6 of the present application.

With respect to claim 7, Yoshinaga does not teach or suggest a frame having end components. Further, Yoshinaga does not teach or suggest an end component made of sheet metal and formed of two substantially similar sheet metal components, adapted at an interval from each other for forming a box-type structure.

With respect to claim 11, Yoshinaga does not teach or suggest applicator elements that are non-contacting and comprise two nozzle units, each nozzle unit including a plurality of nozzles. In Yoshinaga, the coating liquid merely flows through the port/slot 60 onto the web; there is no nozzle unit. Further, there is only one port per side, not two. Moreover, the port/slot 60 of Yoshinaga is incapable of spraying the coating liquid like the nozzle units of the present invention.

With respect to claim 12, Yoshinaga does not teach or suggest nozzle units that are adapted to operate alternately. Again, in Yoshinaga, there are no nozzle units and there is only one port per side of the apparatus. Therefore, it is impossible in Yoshinaga for there to be any alternating operation of nozzle units.

With respect to claim 13, Yoshinaga does not teach or suggest the frame structures of claim 1, therefore Yoshinaga does not teach or suggest a coating station including two of the frame structures according to the present invention.

For all of these reasons, applicant submits that claims 1 - 3 and 5 - 13 are patentable over Yoshinaga in view of Williamson. Therefore, applicant respectfully requests that the Section 103(a) rejection of claims 1 - 3 and 5 - 13 over Yoshinaga in view of Williamson be withdrawn.

This amendment and request for reconsideration is felt to be fully responsive to the comments and suggestions of the examiner and to present the claims in condition for allowance. Favorable action is requested.

U.S. Application No. 10/694,333 -- 10

Respectfully submitted,

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A handwritten signature in black ink, appearing to read "Chris J. Fildes". The signature is fluid and cursive, with the first name "Chris" and last name "Fildes" clearly distinguishable.

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